

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a switching thin film transistor which operates by receiving  
5 a gate signal at its gate and for reading a data signal; and

an element driving thin film transistor provided between a  
driving power supply and an element to be driven, for controlling  
the power supplied from said driving power supply to said element  
to be driven based on a data signal supplied from said switching  
10 thin film transistor; characterized in that

a compensation thin film transistor having an opposite  
conductive characteristic with respect to said element driving thin  
film transistor is provided between said driving power supply and  
said element driving thin film transistor.

15 2. A semiconductor device according to claim 1, wherein a gate and  
either a source or a drain of said compensation thin film transistor  
are connected, and said compensation thin film transistor is  
connected between said driving power supply and said element driving  
20 thin film transistor.

3. A semiconductor device according to claim 1, wherein said  
element driving thin film transistor comprises a plurality of thin  
film transistors connected to each other in parallel.

25 4. A semiconductor device according to claim 3, wherein said  
compensation thin film transistor is a diode connected transistor  
connected between said driving power supply and said element driving  
thin film transistor.

5. A semiconductor device according to claim 1, wherein

said element driving thin film transistor comprises a plurality of thin film transistors connected between said driving power supply and said element to be driven and in parallel to each other; and

said compensation thin film transistor is respectively provided between said plurality of thin film transistors connected in parallel and said driving power supply.

6. A semiconductor device according to claim 5, wherein said compensation thin film transistor is a diode connected transistor connected between said driving power supply and said element driving thin film transistor.

7. A semiconductor device according to claim 1, wherein said element to be driven is an electroluminescence element which includes an emissive layer between a first electrode and a second electrode.

8. A semiconductor device according to claim 6, wherein said electroluminescence element is an organic electroluminescence element which employs an organic compound in an emissive layer.

9. A semiconductor device according to claim 1, wherein said semiconductor device is used for an active matrix type display device wherein each of the pixels arranged in a matrix form comprises said switching thin film transistor, said element driving thin film transistor, said compensation thin film transistor, and said element to be driven as a display element.

10. A semiconductor device according to claim 1, wherein said element driving thin film transistor and said compensation thin film transistor are placed so that the channel length direction of said thin film transistors is along the extension direction of the data line for supplying said data signal to said switching thin film transistor.

11. A semiconductor device according to claim 1, wherein the channel length direction of said element driving thin film transistor does not coincide with the channel length direction of said switching thin film transistor.

12. A semiconductor device according to claim 1, wherein said element driving thin film transistor is formed so that its channel length direction is along the scan direction of a line pulse laser for annealing the channel region of the transistor.

13. A semiconductor device according to claim 12, wherein a gate and either a source or a drain of said compensation thin film transistor are connected, and said compensation thin film transistor is connected between said driving power supply and said element driving thin film transistor.